

SYSTEMS AND METHODS OF COOLING A FIBER AMPLIFIER

ABSTRACT OF THE DISCLOSURE

A system for cooling a fiber amplifier includes a fiber amplifier assembly,
5 which, in turn, includes a longitudinally-extending fiber amplifier, a jacket and a
retaining structure. The jacket surrounds the fiber amplifier and extends at least
partially longitudinally therealong. In this regard, the jacket surrounds the fiber
amplifier such that the fiber amplifier assembly defines a passage between the jacket
and the fiber amplifier for the circulation of coolant therethrough. To facilitate the
10 circulation of coolant, the retaining structure is disposed within the passage defined
by the fiber amplifier assembly for at least partially maintaining a spacing between
the fiber amplifier and jacket. The retaining structure and coolant can both comprise
an emulsion of phase change material.

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